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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,009	10/22/2003	Jeffrey C. Murray	B786.12-0002	8534

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312 SOUTH THIRD STREET
MINNEAPOLIS, MN 55415-1002

EXAMINER

HUNTER, ALVIN A

ART UNIT	PAPER NUMBER
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3711

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/692,009

Applicant(s)

MURRAY, JEFFREY C.

Examiner

Alvin A. Hunter

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

In response to the reply filed 4/12/2005, 112 1st and 2nd issues have been overcome. However, the changes made to the claims to overcome the 112 1st and 2nd issues does not place the application in condition for allowance, therefore, prosecution has been reopened. Action on the merits follow.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1 and 3-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun (USPN 6247636) in view of Duclos (USPN 4444392).

Sun discloses a club head having a crown 12, a sole, 14, and a face 15 wherein the crown is fabricated with a titanium alloy (See Column 2, lines 18 through 39). Sun does not disclose having a shaft mount to the club head and a grip attached to the shaft. One having ordinary skill in the art know that it is conventional to have a shaft attached to the club head and a grip attached to the shaft to facilitate the holding and swing of the club head; therefore, adding such to Sun would have been obvious. Sun does not disclose the club head having a slot on the rear portion of the crown. Duclos discloses a club head having a slot on the rear of the club (See Figure 6 and the

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paragraph bridging Columns 2 and 3). One having ordinary skill in the art would have found it obvious to modify Sun to have a slot on the rear surface of the crown, as taught by Duclos, in order to generate higher club head speed. Applicant does not disclose why it is critical for the slot to have a particular depth and is, therefore, deemed to be an obvious matter of design choice. One having ordinary skill in the art would have drawn therefrom Duclos that the depth of the slot would depend on the size of the club head wherein a larger club may desire a larger depth and length versus a smaller club head. Therefore, it would have been obvious to have the slot at any depth in order to reduce drag and to compensate for the size of the club head.

In regards to claim 3, Duclos discloses the slot wider at the toe portion 48 than at the heel portion 47 (See Paragraph bridging Columns 2 and 3 and Figure 4). Applicant does not disclose why it is critical for the slot to have a particular length and depth and is, therefore, deemed to be an obvious matter of design choice. One having ordinary skill in the art would have drawn therefrom Duclos that the depth and length of the slot would depend on the size of the club head wherein a larger club may desire a larger depth and length versus a smaller club head. Therefore, it would have been obvious to have the slot at any length or depth in order to compensate for the size of the club head.

In regards to claim 4, the applicant does not state why it is critical to use the claimed titanium alloys for the sole, crown, and face; therefore, one having ordinary skill in the art would have found it the selection of materials to be an obvious matter of design choice. The titanium alloy disclosed by Sun would perform equally as well because it has high impact properties.

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In regards to claim 5, Sun discloses a club head having a crown 12, a sole, 14, and a face 15 wherein the crown is fabricated with a titanium alloy (See Column 2, lines 18 through 39). Sun does not disclose having a shaft mount to the club head and a grip attached to the shaft or the club head having a slot on the rear portion of the crown wherein the slot has an upper convex portion, a lower convex portion, and a middle concave portion. One having ordinary skill in the art know that it is conventional to have a shaft attached to the club head and a grip attached to the shaft to facilitate the holding and swing of the club head; therefore, adding such to Sun would have been obvious. Duclos discloses a club head having a slot on the rear of the club wherein the slot has an upper convex portion, a lower convex portion, and a middle concave portion (See Figure 6 and the paragraph bridging Columns 2 and 3). One having ordinary skill in the art would have found it obvious to modify Sun to have a slot on the rear surface of the crown, as taught by Duclos, in order to generate higher club head speed. Applicant does not disclose why it is critical for the slot to have a particular depth and is, therefore, deemed to be an obvious matter of design choice. One having ordinary skill in the art would have drawn therefrom Duclos that the depth of the slot would depend on the size of the club head wherein a larger club may desire a larger depth and length versus a smaller club head. Therefore, it would have been obvious to have the slot at any depth in order to compensate for the size of the club head.

In regards to claim 6, Duclos shows in Figures 4-6 a hollow crown wherein the inner surface with an upper concave portion corresponding to the upper convex portion,

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a lower concave portion corresponding to the lower convex portion, and a middle convex portion corresponding to the middle concave portion.

In regards to claim 7, Sun discloses the face, sole and crown fabricated with at least one titanium alloy (See Column 2, lines 24 through 39).

In regards to claim 8, the slot of Duclos inherently strengthens the titanium alloy.

In regards to claim 9, Sun discloses the club head being casted wherein the slot is preformed but also noted that it is preferred because it is more economical (See Column 3, lines 15 through 51). Therefore, it is submitted that any process be used to form the slot, including forging, would have been obvious so long as the features of the club head are attained.

2. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun (USPN 6247636) in view of Duclos (USPN 4444392) further in view of Teramoto (USPN 6315678).

In regards to claim 10, Sun in view of Duclos does not disclose having a weight added to at least the upper concave portion. Teramoto discloses a club head having a weight attached to the crown of the club head (See Abstract and Figure 1d). One having ordinary skill in the art would have found it obvious to have a weight added within the upper concave portion of the crown of Sun in view of Duclos, as taught by Teramoto, in order to improve the striking power imparted on the golf ball.

In regards to claims 11 and 12, Teramoto teaches the changing of the center of gravity and stabilizing the club head (See Background of the Invention and Summary of the invention).

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3. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sun (USPN 6247636) in view of Duclos (USPN 4444392) further in view of Hancock et al. (USPN 6089070).

In regards to claim 13, Sun discloses a club head having a crown 12, a sole, 14, and a face 15 wherein the crown is fabricated with a titanium alloy (See Column 2, lines 18 through 39). Sun does not disclose having a shaft mount to the club head and a grip attached to the shaft or the club head having a slot on the rear portion of the crown wherein the slot has an upper convex portion, a lower convex portion, and a middle concave portion. One having ordinary skill in the art know that it is conventional to have a shaft attached to the club head and a grip attached to the shaft to facilitate the holding and swing of the club head; therefore, adding such to Sun would have been obvious. Duclos discloses a club head having a slot on the rear of the club wherein the slot has an upper convex portion, a lower convex portion, and a middle concave portion (See Figure 6 and the paragraph bridging Columns 2 and 3). One having ordinary skill in the art would have found it obvious to modify Sun to have a slot on the rear surface of the crown, as taught by Duclos, in order to generate higher club head speed. Applicant does not disclose why it is critical for the slot to have a particular depth and is, therefore, deemed to be an obvious matter of design choice. One having ordinary skill in the art would have drawn therefrom Duclos that the depth of the slot would depend on the size of the club head wherein a larger club may desire a larger depth and length versus a smaller club head. Therefore, it would have been obvious to have the slot at any depth in order to compensate for the size of the club head and to reduce drag. Sun discloses

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the club head being casted but not forged (See Column 3, lines 15 through 51).

Hancock et al. discloses a club head wherein the all of the components of the club head is made by forging titanium (See Abstract). Hancock et al. notes that the disclosed forging process reduces the surface imperfection produced by casting and strengthen the club head (See Background of the Invention and Summary of the invention).

Hancock et al. also teaches welding the components together after forging if the club head comprises more than one piece (See Column 5, lines 12 through 28). One having ordinary skill in the art would have found it obvious to forged the club head components versus casting, as taught by Hancock et al., in order to strengthen the material and to improve the appearance of the material.

4. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun (USPN 6247636) in view of Duclos (USPN 4444392) further in view of Hancock et al. as stated above in view of Teramoto (USPN 6315678).

In regards to claim 14, Sun in view of Duclos and Hancock et al. does not disclose having a weight added to at least the upper concave portion. Teramoto discloses a club head having a weight attached to the crown of the club head (See Abstract and Figure 1d). One having ordinary skill in the art would have found it obvious to have a weight added within the upper concave portion of the crown of Sun in view of Duclos and Hancock et al., as taught by Teramoto, in order to improve the striking power imparted on the golf ball.

In regards to claim 15, Teramoto discloses the weight being a metal, in particular steel (See Column 7, lines 10 through 17).

Response to Arguments


Applicant's arguments with respect to claims 1 and 3-15 have been considered but are moot in view of the new ground(s) of rejection.

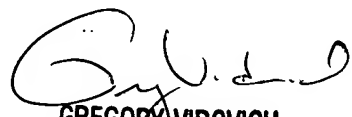
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alvin A. Hunter whose telephone number is (571) 272-4411. The examiner can normally be reached on Monday through Friday from 7:30AM to 4:00PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Vidovich, can be reached on 571-272-4415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Alvin A. Hunter, Jr.


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